REMARKS

Claims 1-33 are pending in this application. Favorable reconsideration of the action mailed September 14, 2006 is respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1, 2-4, 5, 6-8 and 26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (U.S. 6,865,185; "Patel '185") in view of Patel (U.S. 6,850,764; "Patel '764"). Claims 5, 9, 10, 11, 12, 28 and 29 were rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Patel '185 and Patel '764) in view of Tiedemann, Jr. et al. (U.S. 6,567,420). Claims 13-25 were rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Patel '185 and Patel '764) in view of Jalali et al. (Data Throughput of CDMA-HDR).

In Patel '185, a wireless communication system receives a stream of packets each including a flow identifier. (Abstract). Based on the flow identifier, a label that includes a class of service identifier is attached to the packet. (see, e.g., col. 12, lines 6-11). The system assigns each packet to one of a plurality of virtual groups based on its flow identifier. (Abstract). Within the virtual group, the packet is queued in the appropriate class of service queue based on the class of service identifier provided in the label that is attached to the packet. (see, e.g., col. 12, lines 13-17). In order to maintain fairness among flows, packets are checked-out of the class of service queues of a virtual group in a first in first out (FIFO) order. (col. 10, lines 27-29). Similarly, packets output from the different virtual groups are serviced in an order in which they arrive in order to maintain fairness among the groups. (col. 10, lines 31-35).

Patel '764 discloses a system for allocating bandwidth to a geo-location area of a wireless network. In Patel '764, a wireless communication system uses historical data, QoS policies and service level agreement information, allocation policy agreement information, and empirical, field, and environmental data of a wireless network to estimate bandwidth parameters for a geo-location area on a per service class basis. (see, e.g., col. 6, line 41 - col. 7, line 12). The system allocates bandwidth in the geo-location area on the per service class basis based on its bandwidth parameters. (col. 7, lines 41-54). The portions of Patel '764 which the examiner relies on for the alleged teaching of "controlling an order in which the outbound packets are transmitted to

recipients ...." disclose the flow/class re-marking of incoming packets. (col. 7, lines 63-67 and col. 13, lines 20-30). The re-marked packets are then placed in class of service queues (e.g., special class, premium/first class, business/assured class, economy/best effort class) prior to being buffered for transmission to the wireless network. (see, e.g., element 210 of FIG. 11).

Neither Patel '185 nor Patel '764 provides any disclosure of ordering packet transmission "based on: (a) the forward link transmission rate associated with each of the received data packets corresponding to the outbound packets, (b) the service class associated with each of the received data packets corresponding to the outbound packets, and (c) a degree to which an average forwarding percentage for the service class associated with each of the received data packets corresponding to the outbound packets falls below a minimum average forwarding percentage rate assigned to the respective service class" as recited in amended claim 1.

Tiedemann provides no disclosure of ordering packet transmission at all, much less "based on: (a) the forward link transmission rate associated with each of the received data packets corresponding to the outbound packets, (b) the service class associated with each of the received data packets corresponding to the outbound packets, and (c) a degree to which an average forwarding percentage for the service class associated with each of the received data packets corresponding to the outbound packets falls below a minimum average forwarding percentage rate assigned to the respective service class" as recited in amended claim 1. Rather, Tiedemann is concerned with controlling the rate at which remote units transmit packets on the reverse link:

> A base station is used to control the ***reverse link transmission rates for remote units*** within the corresponding coverage area. The base station monitors the reverse link loading and dynamically adjusts the transmission rate set point. The transmission rate set point may be defined in terms of a maximum transmission rate and a transmission probability. The maximum transmission rate defines the maximum reverse link data rate available to the remote units. The transmission probability is used to control the probability that a remote unit transmits at the given maximum transmission rate. The base station may broadcast the transmission rate set point to the remote units. The remote units may transmit at a rate lower than the maximum transmission rate at any time. (col. 3, lines 41-54).

Jalali discloses a system that orders packet transmission based on the reported data rate requests from access terminals and the amount of data that has already been transmitted to each terminal (Abstract). Specifically, on page 1856, Jalali discloses that a scheduler of the system attempts to take advantage of temporal variations of the channel by scheduling transmissions to access terminals during time periods where the access terminals see strong signal levels. The scheduler sends data to the access terminal that has the highest DRC/R, where DRC is the rate requested by the access terminal in a given time slot and R is the average rate received by the access terminal over a window of appropriate size. Jalali does not disclose and would not have made obvious ordering packet transmission "based on: (a) the forward link transmission rate associated with each of the received data packets corresponding to the outbound packets, (b) the service class associated with each of the received data packets corresponding to the outbound packets, and (c) a degree to which an average forwarding percentage for the service class associated with each of the received data packets corresponding to the outbound packets falls below a minimum average forwarding percentage rate assigned to the respective service class" as recited in amended claim 1.

None of the cited references describes nor would have made obvious the features of amended claims 1 and 26.

The dependent claims are patentable for at least the same reasons given with respect to the independent claims from which they depend.

Claim 27 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Patel '185 in view of Bonomi et al. (U.S. 6,069,872).

As previously-discussed, in Patel '185, packets are checked-out of the class of service queues of a virtual group in a first in first out (FIFO) order in order to maintain fairness among flows, and packets are output from the different virtual groups in an order in which they arrive in order to maintain fairness among the groups. (col. 10, lines 27-29 and lines 31-35). There is no disclosure or suggestion in Patel '185 that the packets are scheduled for transmission "based on a quality of an air-link channel that serves the recipient when the packet is to be transmitted and the minimum forwarding performance for each of the classes" as recited in claim 27.

In Bonomi, a switch of an asynchronous transfer mode (ATM) network controls congestion by controlling the transmission rate of each of a number of source nodes connected

by respective virtual channels to the switch. (col. 3, lines 20-41). The switch uses a resource management cell to send information back to each source node to control its bit rate. (col. 6, lines 20-22). Although Bonomi contemplates guaranteeing a minimum percentage of bandwidth to different classes of traffic associated with packets being transmitted by the source node (col. 9, lines 10-13), Bonomi also does not describe and would not have made obvious scheduling packet transmission "based on a quality of an air-link channel that serves the recipient when the packet is to be transmitted and the minimum forwarding performance for each of the classes," as recited in claim 27.

Claims 30-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined system (Patel '185 – Bonomi) in view of Tiedemann. However, the examiner has not provided any indication as to how Tiedemann is relied upon in rejecting claims 30-33. For completeness, the applicant notes that Tiedemann provides no disclosure of ordering packet transmission at all, much less "based on a quality of an air-link channel that serves the recipient when the packet is to be transmitted and the minimum forwarding performance for each of the classes" as recited in claim 27.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 12/5/06

Mandy Jubang
Reg. No. 45,884

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

21433324.doc